UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte JOHN WIRTH JR., JAY L. SANGER, CHARLES H. LATVEN and KEVIN J. FLEMING

Appeal No. 2005-0948
Application No. 09/922,938

HEARD: May 4, 2005

Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's non-final rejection of claims 12, 14 to 16 and 18 to 21. Claims 1 to 10, the only other claims pending in this application, have been allowed.

We REVERSE.

BACKGROUND

The appellants' invention relates to a lathe assembly and a tool rest assembly for a lathe apparatus. A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Gray	114,670	May 9, 1871
Hardy	2,700,912	Feb. 1, 1955
Lebermann	3,065,581	Nov. 27, 1962
McCormack	5,186,087	Feb. 16, 1993
Clay	6,000,447	Dec. 14, 1999
Caddaye	6,178,856	Jan. 30, 2001

Claim 20 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Clay.

Claim 12 stands rejected under 35 U.S.C. § 103 as being unpatentable over McCormack in view of Gray.

Claims 14, 16, 18 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over McCormack in view of Caddaye and Hardy.

Claim 15 stands rejected under 35 U.S.C. § 103 as being unpatentable over Hardy in view of McCormack, Gray and Lebermann.

Claim 21 stands rejected under 35 U.S.C. § 103 as being unpatentable over Hardy in view of McCormack and Clay.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the non-final rejection (mailed August 21, 2003) and the answer (mailed April 7, 2004) for the examiner's complete reasoning in support of the rejections, and to the brief (filed February 24, 2004) and reply brief (filed May 5, 2004) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Claim 20

We will not sustain the rejection of claim 20 under 35 U.S.C. § 102(b) as being anticipated by Clay.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros. Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984), it is only necessary for the claims to "'read on' something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or 'fully met' by it."

Claim 20 reads as follows:

> A tool rest assembly for a lathe apparatus having a lathe bed assembly, said tool rest assembly comprising a tool support housing extending vertically from a tool rest main body, said tool rest main body comprising a tool rest housing and a locking assembly for selectively locking said tool rest housing to the lathe bed assembly, said locking assembly including a locking plate for engaging an undersurface of a bedway of the lathe bed assembly; a slider block seated and disposed within said tool rest housing, a non-circular locking shaft

> extending longitudinally of said housing and disposed through a bore in said slider block, and a locking piston vertically slidably disposed in said slider block, said locking piston having a bore for being aligned with said bore of said slider block to receiving said locking shaft and having a shaft for being detachably mounted to said locking plate, whereby rotation of said locking shaft about the longitudinal axis thereof lifts said locking piston and the locking plate mounted thereto while pressing said block so as to clamp said housing to a bedway between the slider block and the locking plate.

Clay's invention relates to slide rests suitable for lathes. Figures 1 to 4 show a clamping mechanism for locking a banjo[1] 10 to the support rail or rails of a lathe bed. As shown in Figures 2-3, the clamping mechanism includes a cylindrical cam 13 attached to and supported by two bearing members 15. The cam 13 and the coaxial bearing members 15 form a continuous hollow cam shaft 40 having a square passageway 16 of uniform transverse dimensions. The center axis of the cam 13 is offset from and parallel to the axis of the bearing portions. A support block 12 has two semi-cylindrical concave support surfaces 17 which support the bearing members 15 of the cam shaft 40. The bearing members can easily rotate on the surfaces 17.

---

[1] A support bar which is the top member of a toolrest bracket is referred to in the art as a banjo. A banjo consists of a horizontal support which is secured onto the support rails of a lathe bed by way of a clamping mechanism. A vertical portion of the banjo extends upwardly at one end. A top horizontal support bar which is rotatably disposed on the vertical portion of the banjo constitutes the actual toolrest.

As shown in Figures 1 and 4 of Clay, the clamping mechanism further includes an eye bolt having a head portion 21 connected to a threaded shank portion 20. The head portion 21 seats around the cam 13 while the shank portion of the eye bolt extends through a vertically extending opening or hole 26 which is situated in the center of the support member 12 between the two support surfaces 17. The shank portion extends through an elongate, longitudinally extending opening or slot, located at 94, formed in the bottom of the banjo. The shank portion 20 of the eye bolt is connected to a clamping plate 22 and extends through a bore 25 in the clamping plate 22. The shank portion 20 is threaded into a suitable clamp nut 70 which holds the plate 22 from below.

Clay's eye bolt constitutes a connector for connecting the cam 13 to the clamping plate 22. The camming mechanism includes the cam shaft comprised of the bearing members 15 and cam 13, support block 12 and the eye bolt. The cam 13 is eccentric with respect to its integral bearing members 15 and has a larger diameter than the bearing members. As a result, when the cam shaft is rotated the cam moves up and down in relation to the bearing members and in relation to the support block. The up and down movement of the center of the cam is transferred to the eye bolt, causing a generally linear motion in the eye bolt. This motion of the eye bolt causes a corresponding motion of the clamping plate 22. When the cam is rotated away from its

bottom dead center position, the clamping plate will move to the clamped position where it is clamped to a bottom of the support rail or rails 50. When the cam is at its bottom dead center position, the clamping plate will be in an unclamped position with respect to the lathe bed and the banjo will be free to move longitudinally along an elongate opening 72 formed between the rails 50.

As shown in Figures 1 and 4 of Clay, a drive shaft 18 fits through the square passageway 16 formed in the interior of the cam shaft 40. When the elongate drive shaft 18 is rotated by pulling manually on a lever or handle 41, which is attached to a projecting end portion 98 of the drive shaft 18, the rotation of the drive shaft rotates cam shaft 40 and therefore cam 13. The resultant rotation of cam 13 actuates the linear motion of the eye bolt causing the clamping plate 22 to move either up or down as described above.

Clay's banjo has a base 35 with a bottom or bottom surface at 80. Ledges 14 are machined onto or otherwise formed on each side of the base 35 so that the support block 12 is supported by the base. Block 12 is supported not by the drive shaft 18 but by the ledges 14 located on the base 35. The cam shaft 40 is mounted such that it may slide on the drive shaft 18 while the support block 12 is free to slide with the cam shaft along the ledges 14. As such the entire clamping mechanism is free to slide in the

banjo. The preferred banjo is hollow and forms a longitudinally extending passageway 82 in which the clamping mechanism can slide.

The appellants argue (brief, pp. 13-14) that claim 20 is not anticipated by Clay because Clay does not teach a slider block having a bore. Rather, the appellants point out that Clay provides a support block 12 on which a cam 13-15 is rotatably disposed and that support block 12 does not include a bore for receiving a non-circular locking shaft. As such, the appellants conclude that Clay does not anticipate the tool rest recited in claim 20.

In response to this argument, the examiner asserts (answer, pp. 9-10) that:

> The "slider block" is viewed as the combination of elements 12 and 13 in Clay, the bore is clearly shown between element 15 and 13 in figure 4. Whereas Clay provided a slider block comprised of more than one piece, Appellant has chosen a unitary construction. The Examiner notes that Appellant did not claim the slider block to be of single, unitary construction.

In reply to the examiner's response, the appellants argue (reply brief, 3-4) that:

> parts 13 and 12 cannot properly be considered a part of "block" because cam 13 is a part of the cam shaft and moves upward and downward in relation to the support block 12 so that cam 13 and block 12 cannot be considered parts of a (singular) support block. Thus, there is no anticipation of claim 20.

In our view, the claimed slider block (i.e., a slider block having both a non-circular locking shaft disposed through a bore therein and a locking piston vertically slidably disposed therein, wherein rotation of the locking shaft lifts the locking piston (and the locking plate mounted thereto) while pressing the slider block so as to clamp the housing to a bedway between the slider block and the locking plate) is not readable on Clay's support block 12 and cam 13. In that regard, it is our opinion that one skilled in the art would consider only Clay's support block 12 to be a slider block. One skilled in the art would not have considered Clay's cam 13 (which rotates with respect to support block 12 and is supported thereon by bearings 15 resting on two semi-cylindrical concave support surfaces 17) together with the support block 12 to be a slider block. In any event, the feature of claim 20 that upon rotation of the locking shaft the locking piston and the locking plate mounted thereto are lifted while pressing the slider block so as to clamp the housing to a bedway between the slider block and the locking plate is not present in Clay since rotation of the drive shaft 18 does not result in the pressing of support block 12 so as to clamp the housing to a bedway between the support block 12 and the clamping plate 22. As shown in Figure 4 of Clay, the rails 50 of the bedway are clamped between the clamping plate 22 and ledges 14 formed on the base 35 of the banjo.

For the reasons set forth above claim 20 is not anticipated by Clay. Accordingly, the decision of the examiner to reject claim 20 under 35 U.S.C. § 102(b) is reversed.

Claim 12

We will not sustain the rejection of claim 12 under 35 U.S.C. § 103 as being unpatentable over McCormack in view of Gray.

Claim 12 reads as follows:

> A lathe assembly comprising:
> a base unit having first and second longitudinal ends,
> a headstock assembly provided adjacent said first longitudinal end of said base unit, said headstock assembly including a spindle housing having a spindle shaft extending therethrough,
> a first lathe bed assembly provided on said base unit and including a bedway extending longitudinally in a direction parallel to said longitudinal axis of said spindle for slidably receiving at least one of a tool rest and a tailstock;
> a second lathe bed assembly detachably coupled to at least one of said first and second longitudinal ends of said base unit, said second bed assembly including a second bedway for selectively receiving at least one of a tailstock and a tool rest assembly; and
> a second base unit mounted to and supporting a longitudinal end of said second lathe bed assembly remote from said first base unit.

McCormack's invention relates to a wood lathe, and in particular is directed to a wood lathe of such modular construction that it is adaptable for varying purposes.

McCormack teaches (column 1, lines 44-58) that:

> It is known to have a bowl turning attachment securable to the headstock end of a wood lathe, and projecting in the opposite direction from the bed. However situations sometimes occur wherein it is desirable for a bowl turning attachment to be at the tail end of the bed, and in a further embodiment of this invention the tail end of the bed is provided with a flat face, the bowl turning attachment is provided with a complementary flat face, and the two are

> interengageable with dowels and a keyhole clamping device. The bowl turning attachment has the same cross-sectional shape as the bed, at least as far as the side sections are concerned, so that the bowl turning attachment can be utilised to extend the effective length of the bed.

In the embodiment shown in Figures 1-5 of McCormack, a lathe 10 comprises a headstock base 11, a headstock 12 secured to the base, a bowl turning attachment 13 securable either to the head end of the headstock 11 or to the tail end of a bed, a bed 14 comprising at least one short bed section or, in the alternative, a plurality of short bed sections secured end to end, and a motor assembly 15 which is provided with a pivotal mounting 16 by which it is carried from the headstock base 11. If it is required that the lathe should have a higher or lower center height H above the plane P of the bed section, the more expensive and complex headstock 12 remains unchanged but a headstock base of different height may be used. Additionally, or in the alternative, a spacer 17 may be provided between the headstock base and the headstock.

McCormack's bed section 14 is shown in Figure 1 as a single short bed section but in normal usage there would be a plurality of sections 14 as shown in Figure 2, the additional section being marked 14a. The effective bed length can be still further increased in that the bowl turning attachment 13 when secured to the tail end of the bed 14 provides surfaces which are a continuation of the working surfaces of the bed section

14. The bed section 14 is generally similar in cross-sectional shape to portion of the cross-sectional shape of the bowl turning attachment 13 as illustrated in Figure 4.

For the purposes of transferring McCormack's bowl turning attachment 13 quickly and easily from the head end of the headstock base 11 to the tail end of the bed section 14, there is provided a keyhole clamping device generally designated 20 in Figure 5. The keyhole clamping device 20 comprises a spindle 21 rotatable in a depending web 22 of the attachment 13, one end projecting outwardly and terminating in a rectangular locking bar 23 and the other end being carried by a plate 24 which depends from the underside of the upper portion of the attachment 13. The plate 24 is provided with a part-circular groove 25 (Figure 4) and this limits rotation of a knob 26 due to a pin 27 being movable only for the length of the groove 25 as the knob 26 is rotated.

Gray's invention relates to the form of axle-lathe having a "dead center" at each end, the axle being revolved by direct connection with the driving mechanism. As shown in Figure 1, a lathe-bed (A) is fitted with two sliding blocks (B, B') which carry the dead centers (C, C') upon which the axle (D) revolves. The bed is fitted with two carriages (E, E') carrying the cross-sliding tool-rests (F, F'), the carriages being moved longitudinally by power with screw (G), or by hand with hand-wheels (H). A central block or carriage (I) is fitted to the bed of the lathe in which is journaled a hollow shaft (J), through which the

axle (D) passes. As shown in Figures 1-2, the lathe-bed (A) includes a ground engaging support unit under each sliding block.

The appellants argue (brief, pp. 6-8; reply brief, pp. 1-2) that the second base unit recited in claim 12 is not suggested by the teachings of McCormack and Gray. We agree.

McCormack teaches the subject matter of claim 12 except for "a second base unit mounted to and supporting a longitudinal end of said second lathe bed assembly remote from said first base unit." In that regard, we note that the claimed first lathe bed assembly is readable on McCormack's bed section 14 and that the claimed second lathe bed assembly is readable on either McCormack's bowl turning attachment 13 or additional bed section 14a. However, neither McCormack's bowl turning attachment 13 nor additional bed section 14a has a base unit mounted to and supporting their longitudinal end remote from base 11.

As to the feature shown in Figure 1 of McCormack labeled X by the examiner (see page 4 of the answer), we see no basis in the record to conclude that it is a second base unit as recited in claim 12. Feature X is not mounted to the second lathe bed assembly but instead is mounted to the first lathe bed assembly. Additionally, Feature X as shown

in Figure 1 does not support the longitudinal end of the lathe bed assembly remote from the base 11.

In our view, the teachings of Gray do not provide the necessary suggestion or motivation that would have made it obvious at the time the invention was made to a person having ordinary skill in the art to have modified McCormack so as to arrive at the claimed invention. The only possible suggestion for modifying McCormack in the manner proposed by the examiner to meet the second base unit limitation stems from hindsight knowledge derived from the appellants' own disclosure. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

For the reasons set forth above, the decision of the examiner to reject claim 12 under 35 U.S.C. § 103 is reversed.

Claims 14, 16, 18 and 19

We will not sustain the rejection of claims 14, 16, 18 and 19 under 35 U.S.C. § 103 as being unpatentable over McCormack in view of Caddaye and Hardy.

Claims 14 and 16, the independent claims subject to this ground of rejection, read as follows:

> 14. A lathe assembly comprising:
> a base unit having first and second longitudinal ends,
> a headstock assembly provided adjacent said first longitudinal end of said base unit, said headstock assembly including a spindle housing having a spindle shaft extending therethrough,
> a first lathe bed assembly provided on said base unit and including a bedway extending longitudinally in a direction parallel to said longitudinal axis of said spindle for slidably receiving at least one of a tool rest and a tailstock;
> a second lathe bed assembly detachably coupled to at least one of said first and second longitudinal ends of said base unit, said second bed assembly including a second bedway for selectively receiving at least one of a tailstock and a tool rest assembly; and
> a first tailstock assembly selectively slidably disposed in said first bedway, said first tailstock assembly including a quill housing portion having a quill assembly rotatably disposed therein and axially aligned with said spindle shaft of said headstock assembly, and
> wherein at least one of the quill housing portion of the first tailstock assembly and the spindle housing of the headstock assembly is generally elliptically shaped in longitudinal section and generally circularly shaped in transverse cross section so as to define a generally continuously curved outer peripheral surface.

> 16. A lathe assembly comprising:
> a first base unit having first and second longitudinal ends and including a first lathe bed assembly having first and second longitudinal ends and a first bedway defined therein for slidably receiving at least one of a tool rest assembly and a tailstock assembly;
> a headstock assembly mounted to said base unit, said headstock assembly including a spindle housing portion having a spindle shaft rotatably disposed therein;
> a first tailstock assembly selectively slidably disposed in said first bedway, said first tailstock assembly including a quill housing portion having a quill assembly rotatably disposed therein and axially aligned with said spindle shaft of said headstock assembly;

a locking assembly for selectively locking said first tailstock assembly to said first bedway; and

a second lathe bed assembly detachably secured to one of said first and second longitudinal ends of said first lathe bed assembly,

wherein at least one of the quill housing portion of the first tailstock assembly and the spindle housing portion of the headstock assembly is generally elliptically shaped in longitudinal section and generally circularly shaped in transverse cross section so as to define a generally continuously curved outer peripheral surface.

The pertinent teachings of McCormack have been set forth above.

Caddaye's invention relates to lathes. Figure 1 shows a lathe 1 which includes a lathe headstock 8, a demountable auxiliary bed 9, a rotatable turntable 21 carrying a lathe bed 22 on which is mounted a tail stock 23 and a tool rest 26. The turntable 21 enables the lathe bed 22 to be rotated in various positions and to be translated such as is shown in Figures 1, 2, 3 and 4. An auxiliary bed 24 is also demountably attached to the bed 22 as is shown in Figure 3 and may carry a tool rest 26.

Hardy's invention relates to indexing lathes for use in pattern making and similar work requiring angular layout operations. For purposes of this rejection, Hardy's lathe depicted in Figure 1 includes a conventional bed 10, tailstock 12 and tool rest 14.

In this obviousness rejection, the examiner determined that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide McCormack's lathe with a tailstock as suggested by Caddaye and that such a tailstock be shaped as suggested by the tailstock of Hardy.

The appellants argue (brief, p. 12) that because no cross-sectional view of the tailstock of Hardy is provided nor any explanation or even comment on the configuration of this part is provided in Hardy there is no teaching evident in Hardy that would have motivated the skilled artisan to have modified the McCormack/Caddaye combination so as to arrive at the claimed subject matter. We agree. In our view, the teachings of Hardy do not provide the necessary suggestion or motivation that would have made it obvious at the time the invention was made to a person having ordinary skill in the art to have modified the McCormack/Caddaye combination so that the quill housing portion of the tailstock assembly is generally elliptically shaped in longitudinal section and generally circularly shaped in transverse cross section so as to define a generally continuously curved outer peripheral surface.

For the reasons set forth above, the decision of the examiner to reject claims 14 and 16, and claims 18 and 19 dependent thereon, under 35 U.S.C. § 103 is reversed.

Claim 15

We will not sustain the rejection of claim 15 under 35 U.S.C. § 103 as being unpatentable over Hardy in view of McCormack, Gray and Lebermann.

Claim 15 reads as follows:

> A lathe assembly comprising:
> a base unit having first and second longitudinal ends,
> a headstock assembly provided adjacent said first longitudinal end of said base unit, said headstock assembly including a spindle housing having a spindle shaft extending therethrough,
> a first lathe bed assembly provided on said base unit and including a bedway extending longitudinally in a direction parallel to said longitudinal axis of said spindle for slidably receiving at least one of a tool rest and a tailstock;
> a second lathe bed assembly detachably coupled to at least one of said first and second longitudinal ends of said base unit, said second bed assembly including a second bedway for selectively receiving at least one of a tailstock and a tool rest assembly; and
> an indexing assembly for angularly positioning and holding said spindle shaft with respect to said spindle housing at any one of a plurality of intervals, said indexing assembly including an indexing component fixedly secured to said spindle shaft and an indexing pin mounted to said spindle housing of said headstock assembly, and spring urged toward engagement with said indexing component.

The pertinent teachings of McCormack and Gray have been set forth above.

Hardy's invention as noted above relates to indexing lathes. The lathe includes a headstock bracket 16 mounted on the bed 10 at the end thereof opposite the tailstock 12

and carries a head shaft 18 rotatably supported in bearings 20 and 22. One end of the shaft 18 extends outside of the housing formed by the bracket 16 towards the tailstock 12 and rigidly carries a work mounting means such as face plate 26, or any conventional form of work-holding chuck. The other end of the shaft 18 projects beyond the outer end of the housing and carries a handwheel 28 which is drivingly connected thereto, for example by key 30 and set screw 32. The handwheel 28 comprises a hub 34 for mounting the wheel on shaft 18, a web 36, a hand ring 38 and an axially extending drum 40. The headstock bracket 16 is formed with an outer end face which includes a central boss 42, an annular concavity 44 surrounding the boss, and a ring 46 which has a flat annular surface radially outwardly placed with respect to the concavity 44, defining the outer limits thereof, and lying in a plane perpendicular to the axis of shaft 18. Extending radially inwardly from ring 46 are a plurality of scale mounting bosses 48, and rigidly attached to bosses 48 by fasteners 50 is a full circle, accurately divided protractor scale 52 whose graduated periphery rests against the ring 46 on the headstock bracket for firm support.

Hardy's drum 40 constitutes one part of a clamping mechanism for holding the shaft 18 in any desired angular position. The other part of the clamping mechanism is shown in the drawing as being a brake element in the form of a radially extending screw 60 threadedly engaged in a tapped opening in one of the bosses 48 and provided with a

knurled operating head 62 for manual operation. When it is desired to clamp the shaft 18 in any given position, the screw 60 is rotated so as to feed inwardly into contact with the drum 40 and firmly engage the same. When it is desired to have the shaft rotate freely, the screw 60 may be rotated by the head 62 to feed the same away from the drum 40 for release of the handwheel and shaft. In order that the shaft 18 may be set at any desired angular position and accurately maintained therein, Hardy teaches (column 3, lines 20-33) that:

> the outer surface of the drum 40 should remain smooth and free from irregularities which might cause slight angular displacement during the tightening of the screw 60. To this end the outer surface of the drum 40 is preferably ground as smooth as possible and hardened by any suitable process, while the screw 60 is made of metal slightly softer than the surface of the drum and still capable of carrying the required clamping loads on its threads. If necessary the tip of the screw 60 may be made softer than the threads, or a special shoe for bearing on the drum 40 may be attached to the tip of the screw 60 if desired. Likewise the movement of the brake member or screw 60 should be truly radial to prevent any tendency to move the drum during final tightening.

Lebermann's invention relates to an automatic work head and indexing device for use on cutter and surface grinders. Figure 1 illustrates a grinder 10 having a drive 11, a tail stock 12, a grinding wheel 13 and a tooth rest 14. The tail stock 12 is mounted upon a reciprocating table 15 supported upon a base 15' and in horizontal alignment therewith and likewise carried by the table is a combined work head and indexing device 16. As shown in Figures 1, 2, 3, 5, 9 and 10, the combined work head and indexing device 16

comprises a cylindrical housing 17 having a base 18 for securement to the table 15, as well as to support a drive means for the work head. The housing 17 has removable closure plates 19 and 20 secured to respective ends of the housing by suitable bolts. Between the plates 19 and 20 there is oscillatably mounted a hollow spindle 21 which functions as a support for a collet or chuck 22 for reception of an arbor 23, the other end of the arbor being supported by the center 12' of the tail stock 12.

Lebermann's spindle 21 is formed with a multiplicity of notches 107 (see Figure 3) around the periphery inwardly of the arbor supporting end thereof. The closure plate 19 includes a hub 108 having an opening 109 formed therethrough aligned with the notches 107. A cylindrical casing 110 is secured to the hub and has mounted therein a spring-pressed plunger 111. The plunger 111 being spring urged maintains the plunger in engagement with a notch 107 of the spindle holding the same against rotation. In such position of the plunger 111, an indexing disk 60 may be removed and a different indexing disk installed. The casing 110 is formed in two parts 112 and 113 each having a complemental shoulder 113'. When a new indexing disk is secured to the spindle 21, the plunger 111 is raised against the tension of the spring of the plunger and part 112 of the casing is given a half turn so as to disengage the shoulders 113'. The plunger 111 is thus held in a retracted position which releases the spindle 21 for operation of the

indexing device. The plunger 111 is only engaged with the notches of the spindle when it is desired to change an indexing disk.

The appellants argue (brief, pp. 8-11) that it would not have been obvious at the time the invention was made to a person having ordinary skill in the art to have modified Hardy to include a spring-biased pin as taught by Lebermann's spring-biased plunger 111. We agree. In our view, the teachings of Hardy that the outer surface of the drum 40 should remain smooth and free from irregularities would have convinced a person having ordinary skill in the art to not modify the outer surface of the drum 40 to have a multiplicity of notches engagable with a spring-pressed plunger in the manner taught by Lebermann. The only possible suggestion for modifying Hardy in the manner proposed by the examiner to meet the spring urged indexing pin limitation stems from impermissible hindsight knowledge derived from the appellants' own disclosure.

For the reasons set forth above, the decision of the examiner to reject claim 15 under 35 U.S.C. § 103 is reversed.

Claim 21

We will not sustain the rejection of claim 21 under 35 U.S.C. § 103 as being unpatentable over Hardy in view of McCormack and Clay.

Claim 21 reads as follows:

> A lathe assembly as in claim 16, in combination with a tool rest assembly selectively slidably engaged with one of said first and second lathe bed assemblies, said tool rest assembly comprising a tool support housing extending vertically from a tool rest main body, said tool rest main body comprising a tool rest housing and a locking assembly for selectively locking said tool rest housing to the lathe bed assembly, said locking assembly including a locking plate for engaging an undersurface of a bedway of the lathe bed assembly; a slider block seated and disposed within said tool rest housing, a non-circular locking shaft extending longitudinally of said housing and disposed through a bore in said slider block, and a locking piston vertically slidably disposed in said slider block, said locking piston having a bore for being aligned with said bore of said slider block to receiving said Locking shaft and having a shaft for being detachably mounted to said locking plate, whereby rotation of said locking shaft about the longitudinal axis thereof lifts said locking piston and the locking plate mounted thereto while pressing said block so as to clamp said housing to a bedway between the slider block and the locking plate.

The pertinent teachings of Hardy, McCormack and Clay have been set forth above.

The subject matter of claim 21 would not have been obvious to a person having ordinary skill in the art at the time the invention was made for the reasons set forth above regarding claim 16.[2] Accordingly, the decision of the examiner to reject claim 21 under 35 U.S.C. § 103 is reversed.

---

[2] For reasons unknown, the examiner did not apply the patent to Caddaye (applied in the rejection of parent claim 16) in the rejection of dependent claim 21. The additional patent to Clay, applied in this rejection, discloses nothing therein which makes up for the deficiency of the applied prior art discussed above with respect to parent claim 16.

CONCLUSION

To summarize, the decision of the examiner to reject claim 20 under 35 U.S.C. § 102(b) is reversed and the decision of the examiner to reject claims 12, 14 to 16, 18, 19 and 21 under 35 U.S.C. § 103 is reversed.

REVERSED

CHARLES E. FRANKFORT
Administrative Patent Judge

JOHN P. McQUADE
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

) BOARD OF PATENT APPEALS AND INTERFERENCES

NIXON & VANDERHYE, PC
1100 N GLEBE ROAD
8TH FLOOR
ARLINGTON, VA 22201-4714

JVN/jg